

Work Order ID 81090

March-08-12 8:44:45 AM

81090

Page 1

Item ID: D412-742-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Float Skidtube

Start Date: 08/03/2012 **Start Qty:** 1.00 ***1***

Required Date: 22/03/2012 **Req'd Qty:** 1.00 ***1***

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/03/08 Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--	----------------------------------	------------------------------	----------------	---------------	----------------------	-----------------------	-----------------------	--------------------------	------------------------

Draw Nbr	Revision Nbr							
-----------------	---------------------	--	--	--	--	--	--	--

D3391	I							
-------	---	--	--	--	--	--	--	--

100 0.00

100 DOCUMENT CONTROL

DC Memo 0.00

Document Control If D412-742-043 is a W/O on its own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG005

N/A

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81090

March-08-12 8:44:45 AM

81090

Page 2

Item ID: D412-742-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Float Skidtube

Stop

NS2

Start Date: 08/03/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 22/03/2012 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

**Sequence ID/
Work Center ID**

110

110

HandFinish

Hand Finishing

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

HandFinishing

0.00

Memo

0.00

1-Install tubes together and seal them all the way around using Sikaflex
241/291. Ensure tube ends line-up with saddle holes for proper alignment. using
7/16" "T" Pins.

A/RSikaflex-241/-291 11119999

Expiry date: 17/09

✓ 2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against
wearplate, then topped with the SS washer. Seal all bolts with sikaflex except
ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.

A/RSikaflex-241/-291 11119999

Expiry date: 17/09

✓ 3-Remove "T" pins once sikaflex is dry.

✓ 4-Coat all exposed hardware with LPS Procyon. Remove any excess off with
MEK degreaser.

A/RLPS Procyon 11114591

16 Aug 2014

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81090

March-08-12 8:44:45 AM

81090

Page 3

Item ID: D412-742-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Float Skidtube

Stop

NS2

Start Date: 08/03/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 22/03/2012 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

120

QC5- Inspect part completeness to step on W/O

0.00

5126366

120

QC

Quality Control

130

Packaging

0.00

PPP 81074

12/3/19 SJ

130

Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D412-742-043

Location: _____

PPP Rev: _____

140

QC21- Final Inspection - Work Order Release

0.00

MLJ 12/03/19

140

QC

Quality Control

Memo

0.00

MF 12-03-19

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-08-12 8:44:50 AM

Page 1

Work Order ID: 81090

81090

Parent Item: D412-742-043

D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC IPP Rev:F
 11.11.01 as per DS19517 REV.B DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3391-021 *D3391-021* Fwd Tube Assembly		Manufactured	No			110	Each	0.0000	1	1			**
D3391-023 *D3391-023* Mid Tube Assembly		Manufactured	No			110	Each	0.0000	1	1			**
D3391-025 *D3391-025* Aft Tube Assembly		Manufactured	No			110	Each	0.0000	1	1			**
							<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
							FP	1					
							GA	-1					

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-08-12 8:44:50 AM

Page 2

Work Order ID: 81090

81090
D412-742-043

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C4A	Purchased	No	110	Each	3,729.000	24	24	**	<u>Yel 110315</u>
--------	-----------	----	-----	------	-----------	----	----	----	-------------------

AN3C4A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST350	3729	
117688	5	
118112	16	
119749	10	
120187	2000	
120423	10	
120521	510	
120769	515	
120799	163	
120930	500	

AN3C6A	Purchased	No	110	Each	672.0000	10	10	**	<u>Yel 110315</u>
--------	-----------	----	-----	------	----------	----	----	----	-------------------

AN3C6A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	1	
111982	1	
ST351	671	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	13	
119449	21	
120423	182	
120693	400	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-08-12 8:44:50 AM

Page 3

Work Order ID: 81090

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

81090
D412-742-043

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C7A

Purchased

No

110

Each

169.0000

4

4

**

M 110315

AN3C7A

BOLT

Location	Loc Qty	Loc Code
ST351	169	
113149	14	
116169	1	
117313	10	
117619	12	
117688	6	
119749	6	
120731	120	

AN960C10L

NAS1149C0332

Purchased

No

110

Each

0.0000

38

38

**

M 110315 X 38) M 110315

*AN960C10L *

R washer

D4095-041

Manufactured

No

110

Each

7.0000

1

1

**

M 110315

D4095-041

Wearplate Assembly

Location	Loc Qty	Loc Code
FP001	7	
78938	7	

D4095-043

Manufactured

No

110

Each

8.0000

1

1

**

M 110315

D4095-043

Wearplate Assembly

Location	Loc Qty	Loc Code
FP001	8	
78939	8	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-08-12 8:44:50 AM

Page 4

Work Order ID: 81090

81090

Parent Item: D412-742-043

D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

D4095-045

Manufactured No

110

Each

15.0000

1

1

**

M 10315

D4095-045

Wearplate Assembly

Location	Loc Qty	Loc Code
FP001	15	
77737	1	
79042	5	
<u>80702</u>	9	X1

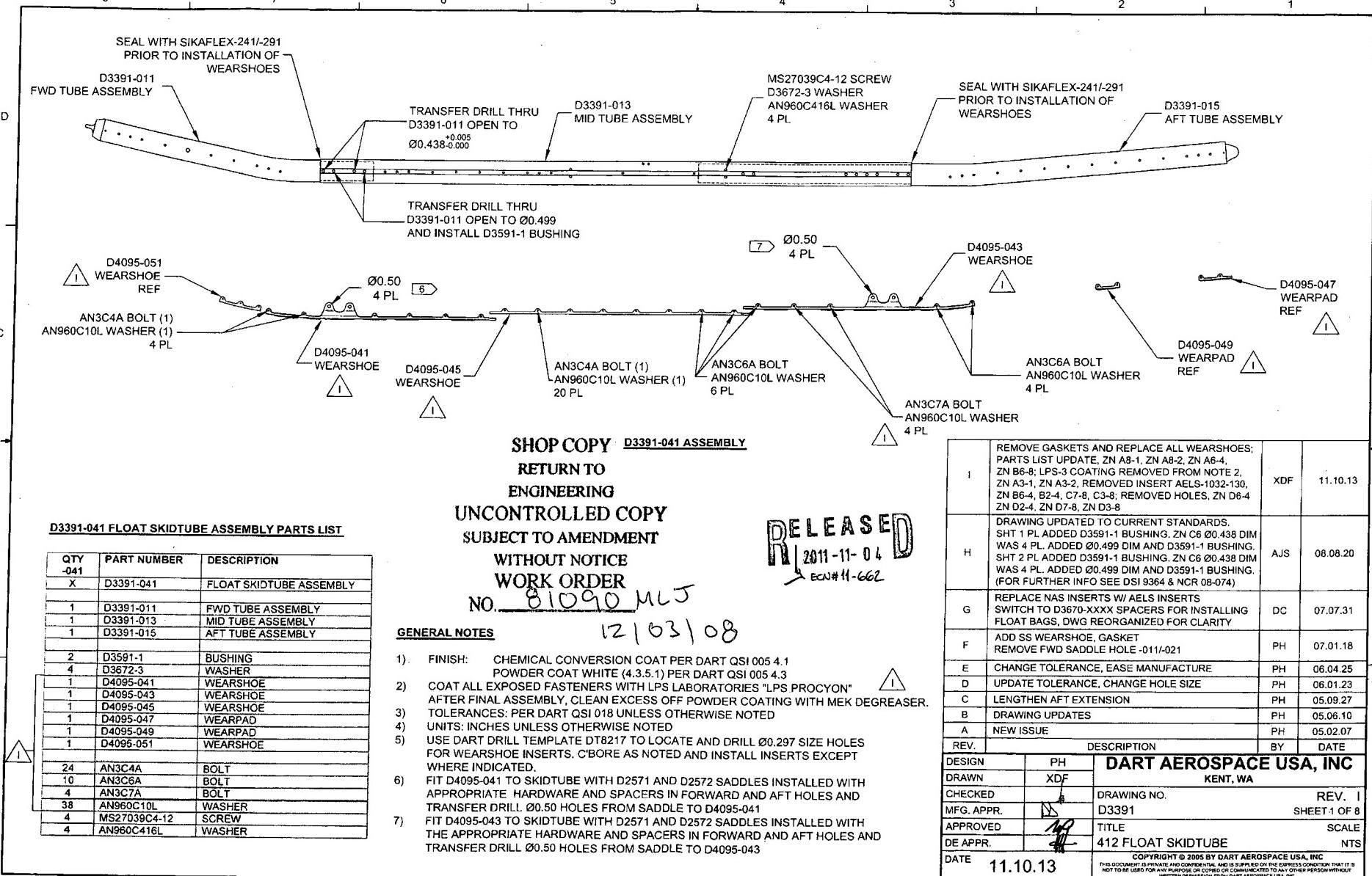
W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

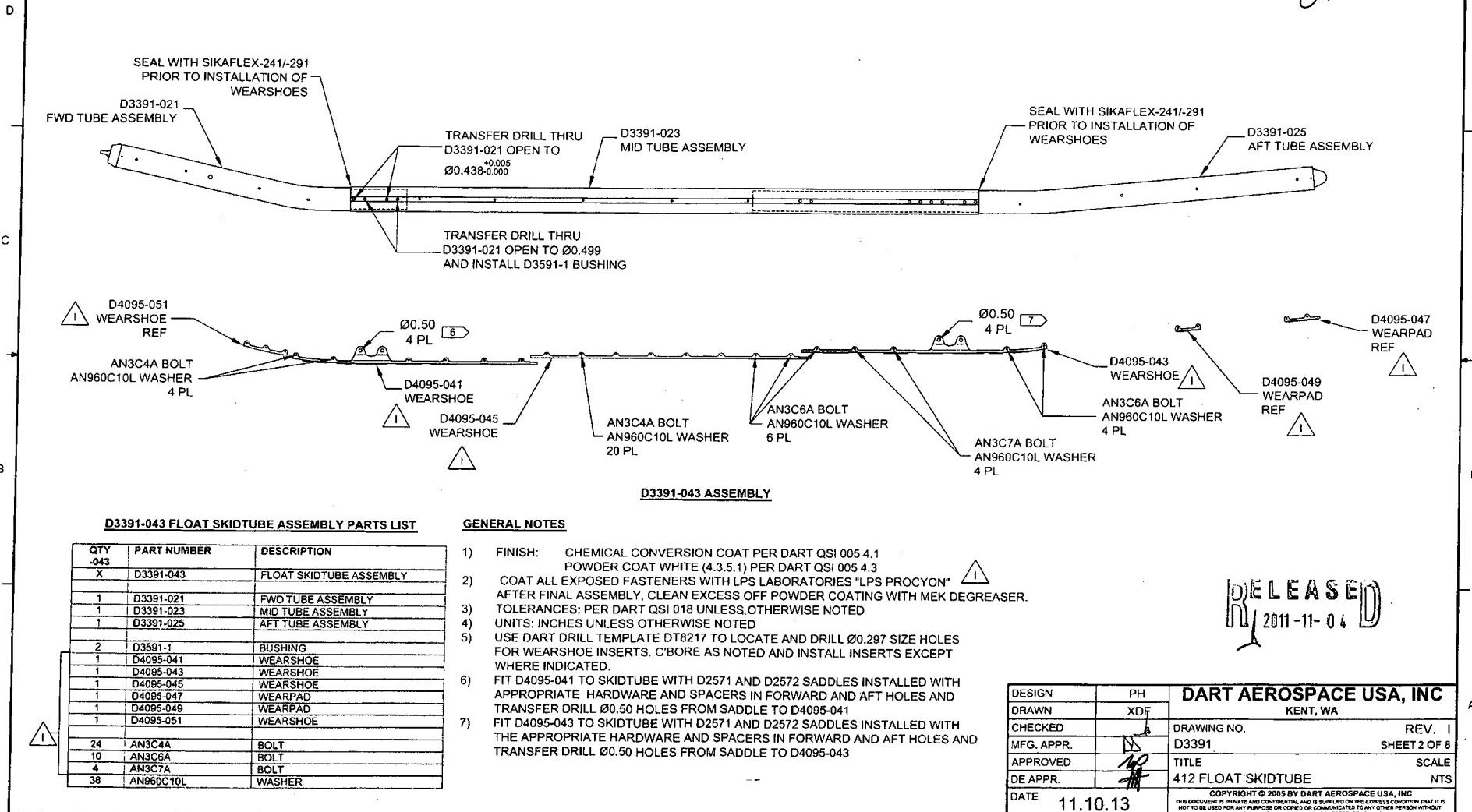
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

81096



8 7 6 5 4 3 2 1

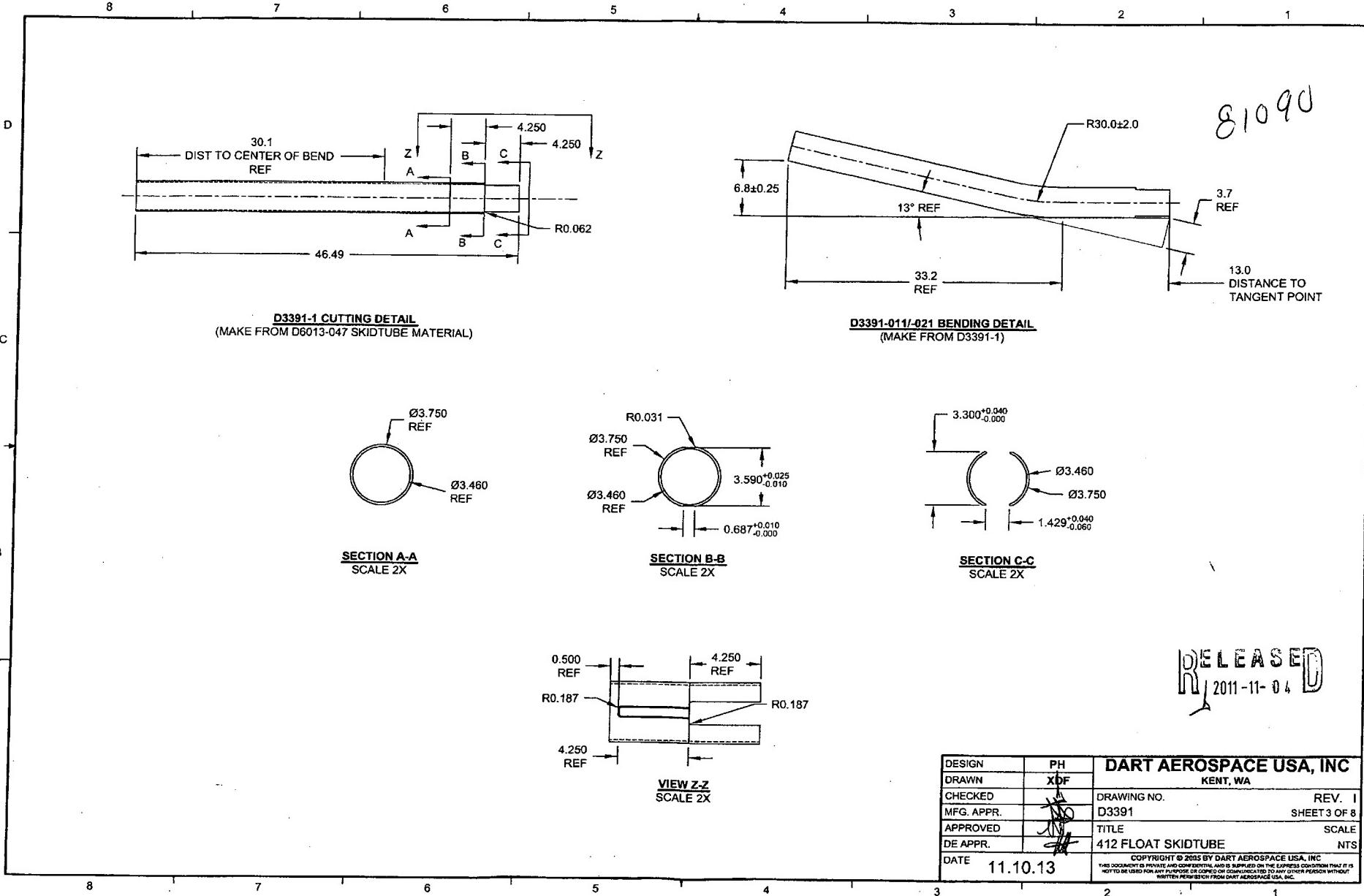
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	XDF	KENT, WA
CHECKED		DRAWING NO.
MFG. APPR.	XNO	REV. I
APPROVED	JW	D3391
DE APPR.		SHEET 3 OF 8
DATE	11.10.13	TITLE
		SCALE
		412 FLOAT SKIDTUBE
		NTS
		COPYRIGHT © 2013 BY DART AEROSPACE USA, INC.
		THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
		NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
		WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

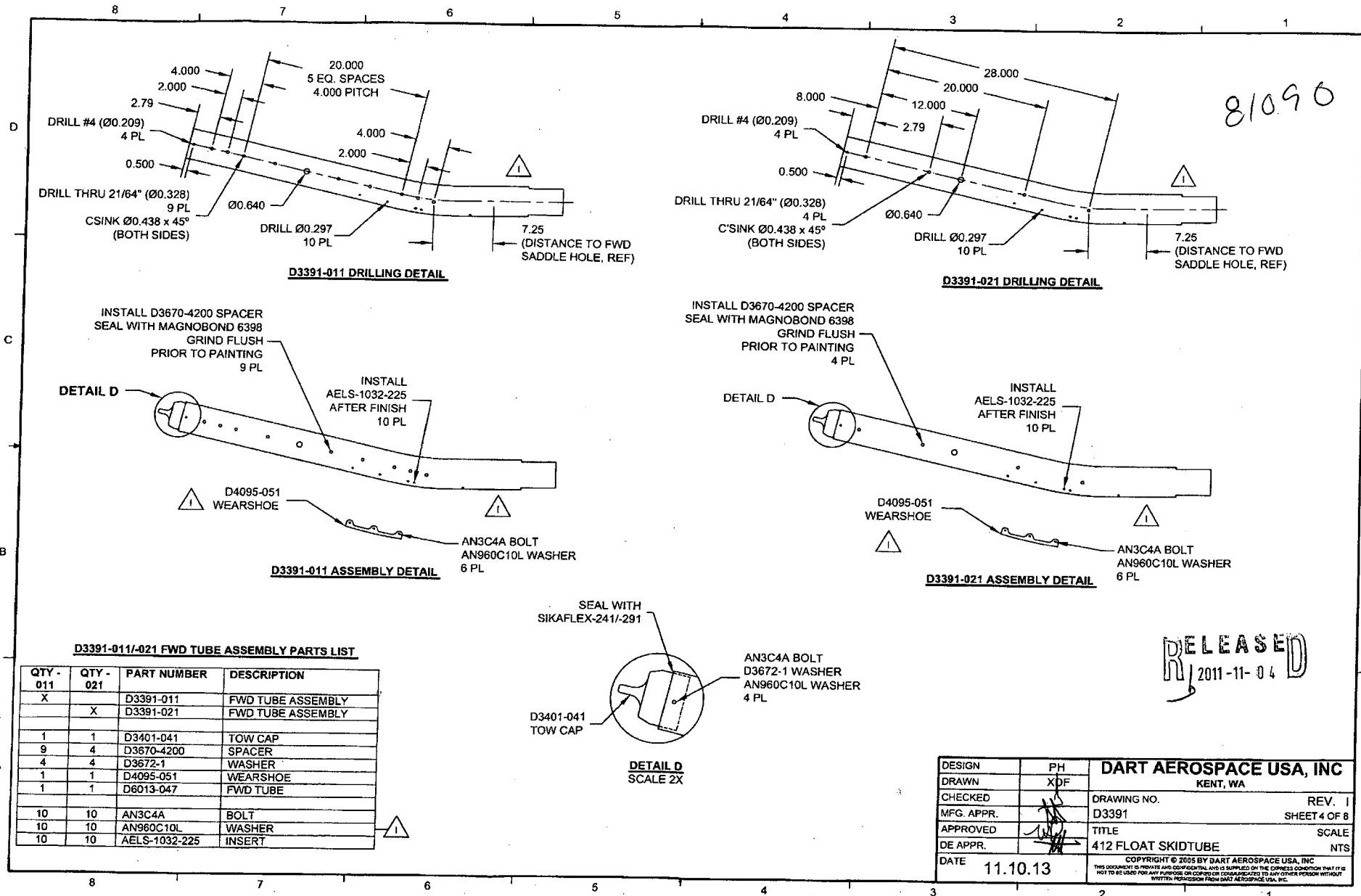
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



81096

RELEASED
2011-11-04

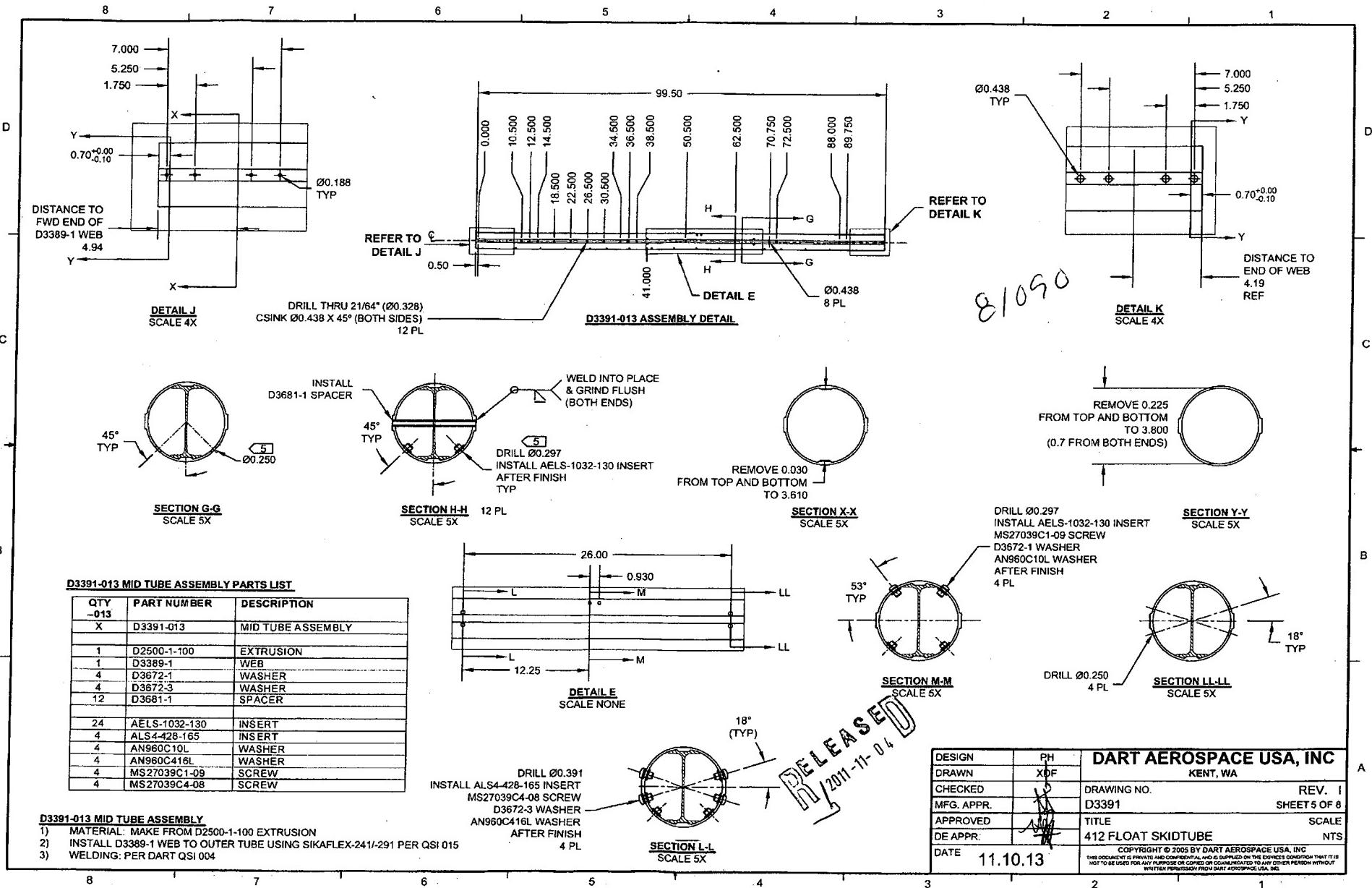
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
11/11/2011

Dart Aerospace Ltd

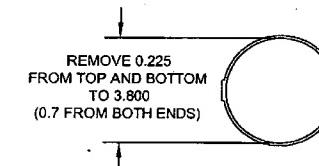
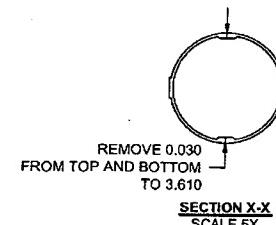
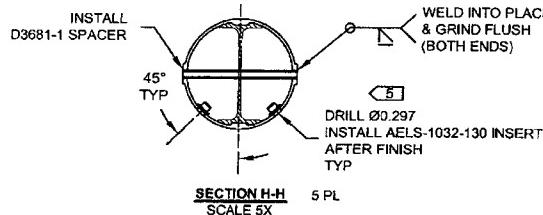
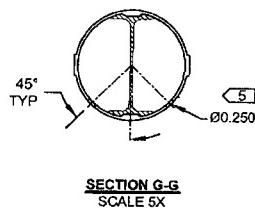
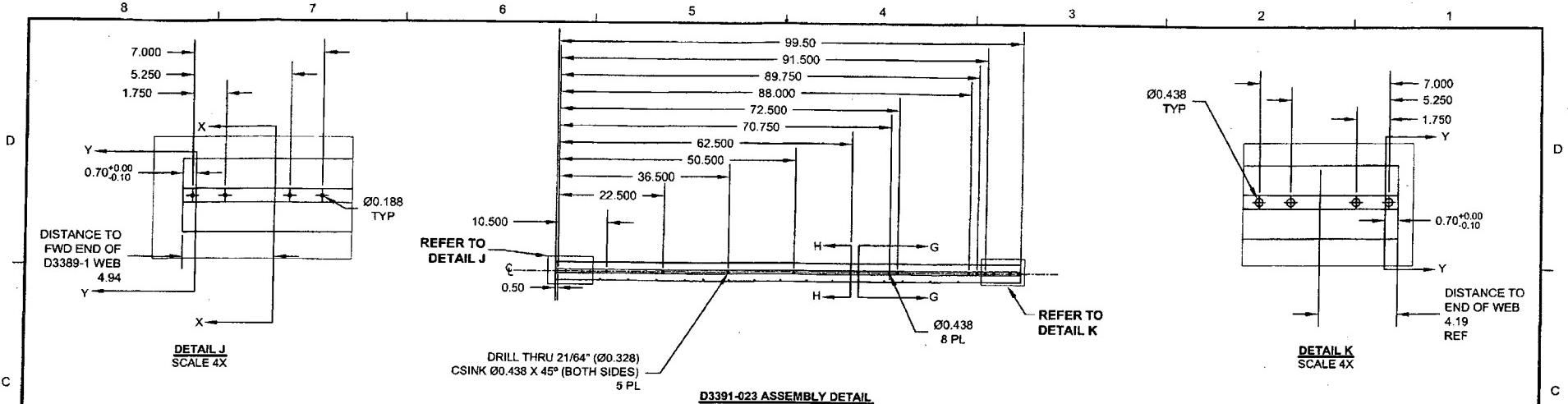
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
023	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	XDF	KENT, WA
CHECKED		DRAWING NO.
		REV. 1
MFG. APPR.		D3391
APPROVED		SHEET 6 OF 8
DE APPR.		TITLE
DATE	11.10.13	SCALE
		412 FLOAT SKIDTUBE
		NTS
		COPYRIGHT © 2005 BY DART AEROSPACE USA, INC
		THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
		NOT TO BE USED FOR ANY PURPOSE OR COMMENCED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
		WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

RELEASED
2011-11-04

Dart Aerospace Ltd

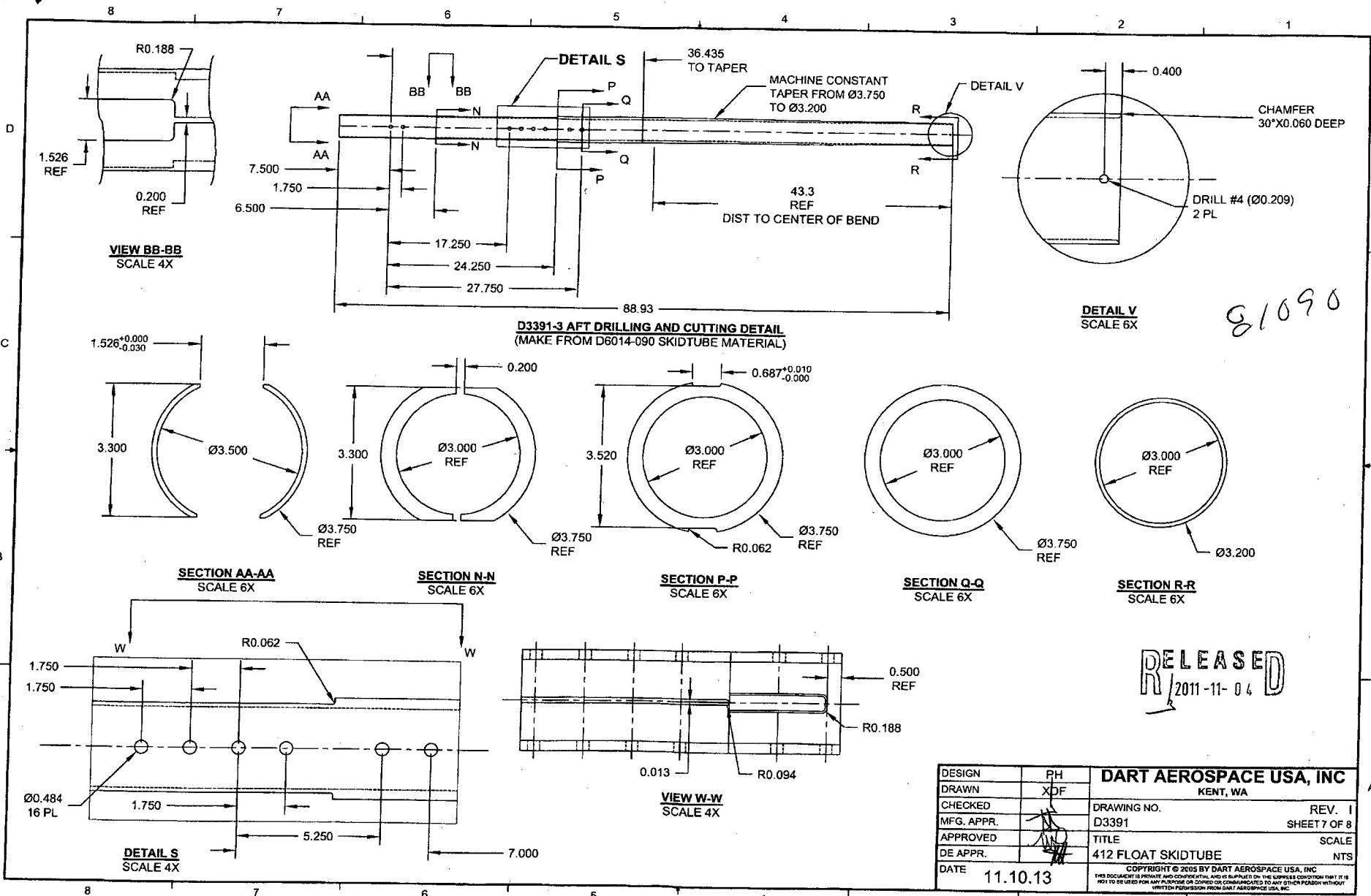
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd

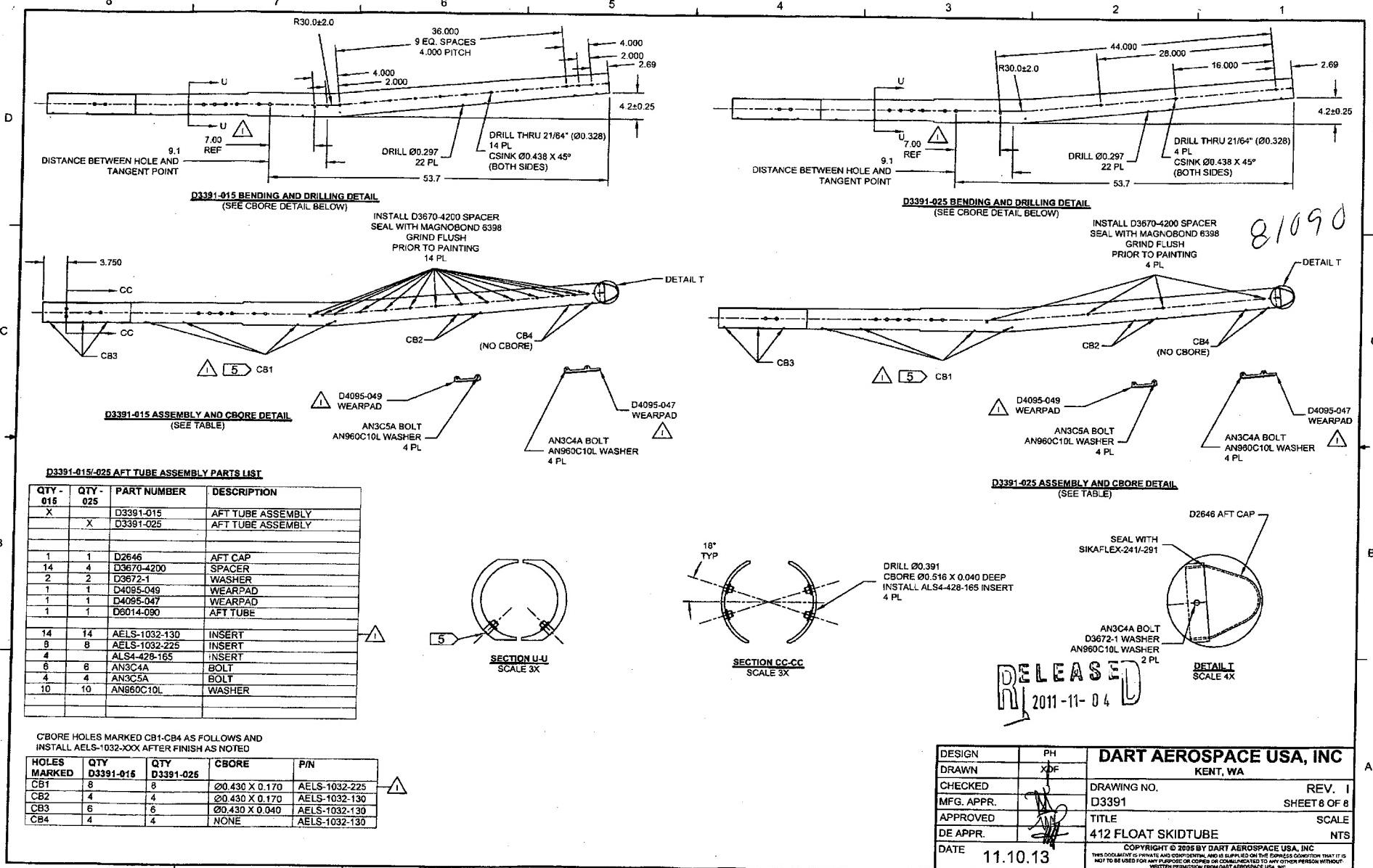
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries